

**WE CLAIM:**

1. A safety system for a gas-operated apparatus for generating energy, in which the apparatus, optionally along with a gas supply, is disposed in the vicinity of an occupied space but spatially separated from it, the safety system comprising
  - at least one gas-sensitive sensor (6) in the occupied space;
  - a control unit (7), which evaluates the output signal of the sensor (6); and
  - means for reducing the gas concentration in the occupied space;
  - the control unit (7), being operable to reduce the gas concentration in the occupied space as a function of the gas concentration ascertained by the sensor (6).
2. The safety system according to claim 1, wherein the gas-operated apparatus for generating energy is disposed in a vehicle (1); and wherein the occupied space is the passenger compartment of a vehicle (1).
3. The safety system according to claim 2, wherein the gas-operated apparatus for generating energy is a gas-operated internal combustion engine for driving the vehicle (1).
4. The safety system according to claim 2, wherein the gas-operated apparatus is a fuel cell operable either for driving the vehicle (1) or as an energy source for accessory systems of the vehicle (1).
5. The safety system according to claim 3, wherein the gas-operated apparatus is a fuel cell operable either for driving the vehicle (1) or as an energy source for accessory systems of the vehicle (1).

6. The safety system according to claim 2, wherein the sensor (6) is disposed in the passenger compartment of the vehicle (1).
7. The safety system according to claim 3, wherein the sensor (6) is disposed in the passenger compartment of the vehicle (1).
8. The safety system according to claim 4, wherein the sensor (6) is disposed in the passenger compartment of the vehicle (1).
9. The safety system according to claim 2, further comprising a second sensor (2), which is disposed outside the passenger compartment of the vehicle (1), in particular in the engine compartment of the vehicle (1).
10. The safety system according to claim 6, further comprising a second sensor (2), which is disposed outside the passenger compartment of the vehicle (1), in particular in the engine compartment of the vehicle (1).
11. The safety system according to claim 9, wherein the sensors (2, 6) are sensitive to hydrogen gas.
12. The safety system according to claim 10, wherein the sensors (2, 6) are sensitive to hydrogen gas.
13. The safety system according to claim 2, further comprising a control unit (8) for interrupting the power supply to the vehicle (1), a fresh-air valve (3), power window controls (4), a fan (5), and a warning device (9) are triggerable by the control unit (7) as a function of the output signals from the sensors (2, 6).

14. The safety system according to claim 9, wherein, when a harmful concentration of hydrogen gas is measured in the engine compartment of the vehicle (1) by the sensor (2), the control unit (7) triggers at least the fresh-air valve (3) in such a way that it is in the closed position.

15. The safety system according to claim 10, wherein, when a harmful concentration of hydrogen gas is measured in the engine compartment of the vehicle (1) by the sensor (2), the control unit (7) triggers at least the fresh-air valve (3) in such a way that it is in the closed position.

16. The safety system according to claim 2, wherein, if a harmful concentration of hydrogen gas is detected in the passenger compartment of the vehicle (1) by the sensor (6), the control unit (7) is triggered to operated at least one fan (5) and/or power window control (4) in such a way that the fastest possible air exchange in the passenger compartment of the vehicle (1) is made possible.

17. The safety system according to claim 9, wherein, when a harmful gas concentration of hydrogen gas is measured by both the sensor (2) and the sensor (6), the control unit (7) triggers the fresh-air valve (3) in such a way that it is in the closed position; and that the power window controls (4) and/or the fan (5) is triggerable by the control unit (7) in such a way that the fastest possible air exchange in the passenger compartment of the vehicle (1) results.

18. The safety system according to claim 9, further comprising a warning device is triggered by the control unit (7), which device outputs an optical and/or acoustical signal to warn the vehicle passengers, when a dangerous situation is ascertained by the sensors (2, 6).

19. The safety system according to claim 18, further comprising power control means (8) responsive to the control unit (7) operable to interrupt the power supply to the vehicle (1) as a function of the potential danger based on the gas concentration ascertained by the sensors (2, 6).

20. The safety system according to claim 19, wherein the control unit (7) is operable to interrupt in the power supply to the vehicle (1) with a time lag after the triggering of the warning device (9).